determining that said table of contents needs to be generated when said table of contents fails to either exist or be up-to-date.

A15

61. (New) The method according to claim 60 wherein the step of determining whether the table of contents is up-to-date comprises the steps of:

comparing a modification date of files to be used in the generation of said table of contents and a date in which said table of contents was last generated; and

determining that said table of contents is not up-to-date when said modification date is more recent than said generation date. —

REMARKS

In complete response to the Office Action dated June 21, 2000, Applicants respectfully request reconsideration and withdrawal of the rejections of the claims.

Claims 1-56 are currently pending in this application. Claims 2, 6-17, 29-40, and 55-56 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, claims 2, 6, and 29 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. Additionally, claims 12, 35, and 52 are rejected under 35 U.S.C. § 112, second paragraph, for lacking proper antecedent basis. Claims 6-15, 29-38, and 46-56 are rejected under 35 U.S.C. § 102(e) as being anticipated by DeRose et al. (U.S. Patent No. 6,055,544) (hereinafter "DeRose"). Claims 1-5, 16-28, and 39-45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over DeRose in

view of Walls et al. (U.S. Patent No. 5,848,410) (hereinafter "Walls"). Claims 1, 2, 6, 10, 11, 13, 15-20, 24, 25, 29, 33, 34, 38-40, 42, 46, 50, 51, 53, 55, 56 have been amended. Claims 57-61 have been added.

The Examiner has rejected claims 2, 6, and 29 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. Specifically, the omitted element is: an "HTML meta-tag of a first type" as an antecedent for the claimed "HTML meta-tag of a second type". Consequently, claims 2, 6, and 29 have been amended by replacing the word "second" in the phrase "of a second type" with the word "predetermined" to overcome the lack of antecedent basis. It is respectfully submitted that such amendments overcome the rejection of claims 2, 6, and 29 under 35 U.S.C. § 112, second paragraph. Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

The Examiner has rejected claims 12, 35, and 52 under 35 U.S.C. § 112, second paragraph, because the phrase "said formatted second table of contents" lacks clear antecedent basis. Consequently, claims 11, 34, and 51 have been amended to add the term "second" to the phrase "table of contents" to overcome the lack of antecedent basis in claims 12, 35, and 52. It is respectfully submitted that such amendments overcome the rejection of claims 12, 35, and 52 under 35 U.S.C. § 112, second paragraph. Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

The Examiner has rejected claims 6-15, 29-38, and 46-56 under 35 U.S.C. § 102(e) as being anticipated by DeRose. For the reasons presented below, it is respectfully

submitted that DeRose does not anticipate, nor otherwise suggest, the subject matter of the present invention. Hence, the rejections based on 35 U.S.C. § 102(e) are respectfully traversed.

Prior to discussing these grounds of rejection, a brief summary of Applicants' novel method for dynamically generating a table of contents view of a HTML-based information system will be described in order to highlight some of the advantageous characteristics thereof.

The present invention automatically provides a user with a table of contents that is reflective of the information that is currently available on a computer system. The table of contents is generated by scanning specific files to identify those of a particular type, and then further analyzing the identified files for pre-defined information, such as HTML meta-tags. The information gathered is merged with pre-defined HTML template files that control the formatting and presentation of the information. The resulting table of contents which is provided to the user accurately reflects the current content of the information system.

The present invention offers the advantages of creating a table of contents on demand, based on the current contents of the information system being accessed. The dynamically-generated table of contents is based upon information contained in numerous, individual files located within the information system. No compilation of the files that make up the system is necessary. All files are text-based, and in a standard format, such

as HTML. The format of the table of contents is determined by pre-authored template files. This allows each module to have its own style of presentation.

One of the advantageous characteristics of the present invention is its use of a multi-file information system from which to dynamically generate a table of contents. Conventional help systems require an author to create a table of contents that reflects the individual components that are known to exist on the system. In such conventional systems, links to individual "books" and "chapters" (*i.e.*, subsections) are typically hard-coded to reflect the current location of the help information files. Once installed, if users move or delete files, these links are broken, causing at least a portion of the table of contents to cease to function. Additionally, if new information is added to the system, the pre-authored table of contents will fail to reflect the addition of the new information. The method of the present invention of dynamically-generating a table of contents based on a multi-file information system overcomes these limitations.

In the present invention, a dynamically-generated table of contents based on a multi-file information system allows both users and developers to freely move and delete individual information files within the system without the need to re-create the table of contents. Once the system is accessed by the user or developer, any changes are automatically reflected in the generated table of contents. Additionally, reorganization, removal, addition and alterations to individual information files have no affect on other files located in the information system. In other words, the multi-file system of the present invention creates no dependencies between individual information files. For instance, when

a user installs a new software package, the new information files contained in the package are reflected in the table of contents the next time the information system is accessed. The new information files are presented along with the information files previously contained in the system, which are unaffected by the change. Thus, regardless of the number and variety of information files from software packages installed on or removed from a system, the use of the multi-file-based information system of the present invention consistently provides the user with a complete and up-to-date table of contents that reflects the current information available to the user. Conventional information systems would fail to provide an up-to-date table of contents in such instances.

In addition, the present invention contemplates individual entries in a table of contents which are links to information located remotely, such as on the Internet. Since there is no dependency between individual files, the multi-file based system of the present invention allows a complete and functional table of contents to be automatically generated even if the information residing at the remote location is inaccessible. Conventional information help systems would either partially or wholly cease to function in such instances.

In contrast to the present invention, DeRose teaches a method of using meta-tags inserted into large, single, electronic documents to provide easier retrieval and access to selected portions of the document over remote connections. As described in DeRose, "[t]he architecture . . . simplifies access to very large documents in a client-server system across the Internet or other computer networks by reducing the amount of information that is

transmitted and by improving navigational and viewing tools." [DeRose, col. 11, lines 27-31] The DeRose method allows the user to retrieve a selected portion of a large document from a remote server, and have only that portion transmitted to the client. [*see* DeRose, col. 4, lines 34-36] The meta-tags are used to organize the single, larger document into its constituent parts — in other words, breaking down a single book into its literal chapters, sections, paragraphs, and sentences, with the accompanying titles for each of the parts. [*see* DeRose, col. 8, lines 18-23]

In addition, DeRose neither teaches nor contemplates a method for generating a table of contents of a computerized help system comprised of numerous, individual files. DeRose teaches the creation of a table of contents for large, single, electronic documents. An operational manual is given as an example of a large electronic document that can be indexed using the DeRose method. [*see* DeRose, col. 8, lines 14-18] In fact, DeRose specifically teaches away from a multi-file based system such as that contemplated in the present invention: "[t]he [DeRose] invention improves document management by permitting a user to view *self-contained* document fragments and to navigate between different document fragments in a manner which provides consistent results to the user. The need to generate many small documents with hyperlinks between them is *eliminated.*" [DeRose, col. 21, lines 42-47 (emphasis added)] Furthermore, "the need to maintain many small documents and to provide navigational documents is eliminated because they are generated dynamically instead." [DeRose, col. 22, lines 3-5] DeRose also states that "it is a general aim of the invention . . . to automatically determine what portion of the document

to select as a previous portion or a next portion without maintaining separate data files of each portion of the document." [DeRose, col. 4, lines 34-39]

Thus, DeRose starts with a single, large document and demarcates the larger document into smaller subparts to ease perusal and retrieval. [*see* DeRose, col. 4, lines 34-36: "it is a general aim of the invention to provide a mechanism for accessing only a portion of a large electronically published document. . . ."] DeRose creates a hierarchy of the document based on the (literal) chapters, sections, and paragraphs of the document. [*see* DeRose, col 4, line 64 - col. 5, line 1] A table of contents is generated for the larger document to facilitate access to its various subparts. [*see* DeRose, col. 13, lines 18-21] Consequently, DeRose teaches a method for providing a table of contents for large electronic documents, not a table of contents for an information system comprised of numerous files which can be individually moved, added, deleted and modified. The DeRose method, therefore, is precisely the opposite of that which is contemplated in the present invention: the DeRose method starts with a single document and breaks that document up into smaller subparts, with each subpart containing a table of contents; the present invention starts with numerous files and generates a single, organized table of contents covering all of the various files. In fact, the DeRose method teaches away from the use of numerous files, since DeRose does not provide a means for scanning and assimilating the information contained in multiple files — the DeRose method must start with a single document. DeRose makes the perusal of large documents easier, and specifically teaches away from the creation of a table of contents based upon a collection of

numerous small documents. [*see* DeRose, col. 4, lines 36-39: "it is a general aim of the invention . . . to automatically determine what portion of the document to select as a previous portion or a next portion without maintaining separate data files of each portion of the document." *See also* DeRose, col. 5, lines 54-55: "[t]he need to generate many small documents with hyperlinks between them is eliminated."]

In response to the Examiner's rejections, with regards to the rejection of claims 6, 29, and 46 based on DeRose, DeRose does not disclose the step of "indexing each file and a first level of each book of a predetermined folder for *files* of a first type." [Meyer, claim 6, page 27, lines 4-5 (emphasis added). *See also* Meyer, claim 29, page 31, lines 7-8; Meyer, claim 46, page 34, lines 9-10] As noted above, the present invention is based on a multi-file information system. The number, location, and content of these information files can be continually changed and the present invention would still be able to generate a complete and up-to-date table of contents. In contrast, DeRose indexes a single, large file with generalized markup tags. Furthermore, DeRose embeds the index information in the single, large document and creates the table of contents from the embedded information. [*see* DeRose, col. 17, lines 64-66: "[o]nly those elements which have titles are considered to be elements of the table of contents tree."] DeRose specifically teaches away from the generation of a table of contents for an information system comprised of numerous files, because the objective of the DeRose method is to eliminate the need to maintain separate data files. [*see* DeRose, col. 4, lines 34-39; *see also* DeRose, col. 5, lines 54-55] In other words, the DeRose method does not contemplate the indexing and scanning of numerous

files, because there is no need in the DeRose method to do so. Consequently, since the DeRose method begins with a single file in which index information is already embedded, the DeRose method does not teach looking outside that single file for any additional information. Such a methodology is contrary to what is recited in claims 6, 29, and 46 of the present invention.

With regards to the rejection of claims 7, 30, and 47 based on DeRose, the file discussed at col. 8, lines 15-18 of DeRose is not a help file. DeRose contemplates a single electronic document. An operational manual for a computer system is given merely as an example of a large document for which the DeRose method would make remote perusal of its constituent parts much easier.

With regards to the rejection of claims 8, 31, and 48, DeRose does not teach that the file can be a text file with a creator designation. The reference given in the Office Action (DeRose, col. 15, lines 23-25) discusses the use of additional style elements in the electronic document. [*see* DeRose, col. 14, lines 40-44: "The header information is defined by style definition for a "#header" style in a style sheet for the given document type definition of the selected SGML document. This "#header" style should not be confused with a <header> element, but is rather a reserved style name."] These style elements are used to place additional information either before (the "#header") or after (the "#footer") sections of the document. A creator designation, however, is a characteristic of the document itself — it designates the type of file the document is or the class of files to which the document belongs. In other words, the creator designation is a specification of

which program created the given file. In an exemplary embodiment, creator designations are used in the Macintosh® operating system to associate files with executable programs (*e.g.*, Microsoft Word documents with the Microsoft Word program). In another exemplary embodiment, the Windows® operating system uses the three-digit suffix of the 8.3 file naming convention to perform the same function (*e.g.*, ".doc" associates Microsoft Word documents with the Microsoft Word program). [*see* the present application at page 7, lines 19-21] In the present invention, a creator designation is used to expedite file identification. [*see* the present application at page 7, lines 15-17]

In contrast, because the DeRose method deals with a single document, the DeRose method in no way contemplates the use of creator designations. In other words, since the DeRose method starts with a single document, DeRose does not teach a method for scanning numerous, individual files. Since DeRose does not teach a method of scanning numerous, individual files, DeRose does not contemplate a method of uniquely identifying these files to expedite file identification. Consequently, the DeRose method does not teach the use of creator designations. Finally, since other techniques to specify a creator designation are contemplated by the present invention — such as the ubiquitous 8.3 file naming convention — it should be further noted that the DeRose method does not teach the scanning for individual files using any type of creator designation.

With regards to the rejection of claims 10, 33, and 50, these claims of the present invention disclose a method and system of dynamically generating a table of contents for the chapters of the books in a multi-file information help system. [*see*, *e.g.*, claim 10, page

27, lines 18-19 (emphasis added): "indexing each chapter within each book of said predetermined folder for *files* of a first type"; claim 33, page 32, lines 1-2; claim 50, page 35, lines 3-4] The use of a multi-file system allows the present invention to create a complete and up-to-date table of contents of the chapters of the information help system, even if individual files are moved, added, or deleted from the system. In contradistinction to the present invention, DeRose does not teach the generation of a table of contents based on a multi-file system. Rather, DeRose teaches away from any such method [*see* DeRose, col. 21, lines 45-47: "[t]he need to generate many small documents with hyperlinks between them is eliminated."] as being contrary to the stated objectives of DeRose. [*see* DeRose, col. 4, lines 34-39]

With regards to the rejection of claims 11, 34, and 51, for the references given by the Examiner (*i.e.*, DeRose, col. 15, lines 1-20; col. 18, lines 22-34), DeRose does not teach the formatting of a table of contents using an HTML template. For the given reference, DeRose discusses the use of a style definition which includes a field which contains the title to be displayed in the table of contents generated by DeRose's method. This field is referred to by DeRose as a "title bearer." [*see* DeRose, col. 18, lines 26-30] As discussed by DeRose, "[o]nly those elements for which the style definition indicates a title bearer are included in the table of contents." [DeRose, col. 18, line 33-34] DeRose does not indicate the use of templates to format the table of contents, but merely the use of a type of style definition which specifies what are the various titles in the document. The DeRose method then parses the electronic document for these specific style definitions

when it generates its table of contents. [*see* DeRose, col. 19, lines 4-15] In other words, the portions of DeRose noted in the Office Action are directed to the *selection* of elements to be included in a table of contents, rather than the *format* of those elements for display.

With regards to the rejection of claims 12, 35, and 52, DeRose does not implicitly include that the table of contents is provided upon user request. The DeRose method will generate a table of contents, so long as the "title bearer" style definitions are present within the document. No determination is made by the DeRose method as to whether or not a table of contents should be generated — if the title bearer style definitions exist, the DeRose method will generate a table of contents. [*see* DeRose, col. 18, line 59 - col. 19, line 3] No such mechanism for determining whether a table of contents should be generated upon user request (as that contemplated by the present invention) is taught by DeRose. Rather, depending on the size of the portion of the document selected by the user, either the document portion itself is sent, or, if the portion is too large, a table of contents is sent instead. [*see* DeRose, col. 13, lines 18-23]

With regards to the rejection of claims 13, 14, 36, 37, 53, and 54, DeRose does not teach or contemplate that the generated table of contents can define a link to a location of a document in the system, whether it be an actual file or a web page. The DeRose method teaches that the links generated are to sections within a single document, not to other documents located elsewhere in either the same or remote system. [*see* DeRose, col. 11, lines 31-37; *see also* DeRose, col. 14, lines 30-32: "context information may also be hypertext link to content of the electronic document which is prior or subsequent to the

currently displayed element."] The DeRose method is merely able to parse a single document, and the table of contents it generates is to the chapters and sections contained within that single document alone. As noted earlier, the DeRose method teaches away from the generation of a table of contents based upon numerous files contained within an information system. The DeRose method is simply a method of parsing and organizing a single, large document for easier perusal by the user.

With regards to the rejection of claims 15 and 38, DeRose does not contemplate the determination of whether a table of contents is to be generated. As discussed previously, the DeRose method will generate a table of contents, so long as the "title bearer" style definitions are present within the document. No determination is made by the DeRose method as to whether or not a table of contents should be generated — if the title bearer style definitions exist, the DeRose method will generate a table of contents. Rather, the DeRose method makes a determination as to whether or not to *display* the generated table of contents. As discussed in DeRose, "[g]iven the determined size of the selected element, if it is too big . . . a document summary, such as a table of contents, or other navigational aid, is sent . . . rather than the actual text of the selected element. . . ." [DeRose, col. 13, lines 18-21] Consequently, no such mechanism for determining whether a table of contents needs be *generated* (as that contemplated by the present invention) is taught by DeRose. Rather, DeRose discloses a mechanism for determining whether a table of contents needs to be *displayed*.

Finally, with regards to the rejection of claims 55 and 56, examples 1 and 2 of col. 15 of DeRose are examples of the use of the "#header" style definition. [*see* DeRose, col. 14, lines 51-52: "Example style definitions of the #header style are provided below"]. These two examples show how to embed environment information from the remote server in the header of the single, electronic document or into portions of that same document. These examples have nothing to do with the generation of a table of contents — these are not the title bearer style definitions discussed earlier. For an actual example of how the DeRose method specifies the title bearers in a markup language, please refer to DeRose, col. 19, lines 18-22. Furthermore, the DeRose method does not teach the generation of a table of contents only if the templates exist. Rather, the DeRose method will only generate a table of contents if the single electronic document contains the title bearers. [*see* DeRose, col. 18, lines 33-34: "[o]nly those elements for which the style definition indicates a title bearer are included in the table of contents."] It should be noted that, unlike DeRose, the present invention utilizes an HTML template to format the table of contents for the various files (books and chapters).

For at least the foregoing reasons, therefore, it is respectfully submitted that DeRose neither anticipates nor otherwise suggests the subject matter of claims 6-15, 29-38, and 46-56. Accordingly, reconsideration and withdrawal of these grounds of rejection are respectfully requested.

Claims 1-5, 16-28, and 39-45 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over DeRose in view of Walls. This rejection is respectfully traversed.

As discussed earlier, DeRose does not teach a method of creating a table of contents based upon numerous, individual information files (*i.e.*, a multi-file system). In fact, DeRose specifically teaches away from such a method as being contrary to the stated objectives of the invention. [*see* DeRose, col. 4, lines 34-39] Walls, however, teaches a method of searching one or more files within a file system to provide the user with an updated index. [*see* Walls, col. 3, lines 48-55] At the outset, it is to be noted that an index, as contemplated in Walls, is not the same as a table of contents. The purpose of an index is to enable a user to efficiently search files to locate a particular item of information. [*see* Walls, col. 3, lines 55-59] In contrast, a table of contents is designed to provide the user with a high-level overview of the structure and contents of a file or collection of files.

Furthermore, DeRose specifically teaches away from the use of multiple files. Consequently, one of ordinary skill in the art would not be motivated to modify its system in a manner which goes against the express teachings of DeRose. Therefore, since the teachings of DeRose and Walls are directed to disparate objectives, and in fact are contrary to each other, it would not have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine the teachings of DeRose and Walls (or DeRose and any other teaching which suggests the use of a multi-file system). Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

For the foregoing reasons, it is respectfully submitted that the subject matter of claims 1-5, 16-28, and 39-45 is neither anticipated nor otherwise suggested by DeRose and

Walls, whether considered individually or in combination. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

All of the rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and a notice to that effect is earnestly solicited. Should the Examiner have any questions regarding this response or the application in general, he or she is urged to contact the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: Andrew J. Bateman

Andrew J. Bateman
Registration No. 45,573

Post Office Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: September 21, 2000